

And in prosecution of this Experiment, having taken the filings of Iron and Steel, and with the point of a Knife cast them through the flame of a Candle, I observed where some conspicuous shining Particles fell, and looking on them with my *Microscope*, I found them to be nothing else but such round Globules, as I formerly found the Sparks struck from the Steel by a stroke to be, only a little bigger; and shaking together all the filings that had fallen upon the sheet of Paper underneath, and observing them with the *Microscope*, I found a great number of small Globules, such as the former, though there were also many of the parts that had remained untoucht, and rough filings or chips of Iron. So that, it seems, Iron does contain a very *combustible sulphureous* Body, which is, in all likelihood, one of the causes of this *Phænomenon*, and which may be perhaps very much concerned in the business of its hardening and tempering: of which somewhat is said in the Description of *Muscovy-glass*.

So that, these things considered, we need not trouble our selves to find out what kind of Pores they are, both in the Flint and Steel, that contain the *Atoms of fire*, nor how those *Atoms* come to be hindred from running all out, when a dore or passage in their Pores is made by the concussion: nor need we trouble our selves to examine by what *Prometheus* the Element of Fire comes to be fetcht down from above the Regions of the Air, in what Cells or Boxes it is kept, and what *Epimetheus* lets it go: Nor to consider what it is that causes so great a conflux of the atomical Particles of Fire, which are said to fly to a flaming Body, like Vultures or Eagles to a putrifying Carcass, and there to make a very great pudder. Since we have nothing more difficult in this *Hypothesis* to conceive, first, as to the kindling of Tinder, then how a large Iron-bullet, let fall red or glowing hot upon a heap of Small-coal, should set fire to those that are next to it first: Nor secondly, is this last more difficult to be explicated, then that a Body, as Silver for Instance, put into a weak *Menstruum*, as unrectified *Aqua fortis* should, when it is put in a great heat, be there dissolved by it, and not before; which *Hypothesis* is more largely explicated in the Description of Charcoal. To conclude, we see by this Instance, how much Experiments may conduce to the regulating of *Philosophical notions*. For if the most Acute *Des Cartes* had applied himself experimentally to have examined what substance it was that caused that shining of the falling Sparks struck from a Flint and a Steel, he would certainly have a little altered his *Hypothesis*, and we should have found, that his Ingenious Principles would have admitted a very plausible Explication of this *Phænomenon*; whereas by not examining so far as he might, he has set down an Explication which Experiment do's contradict.

But before I leave this Description, I must not forget to take notice of the Globular form into which each of these is most curiously formed. And this *Phænomenon*, as I have elsewhere more largely shewn, proceeds from a propriety which belongs to all kinds of fluid Bodies more or less, and is caused by the Incongruity of the Ambient and included Fluid, which so acts and modulates each other, that they acquire, as neer as is possible,

possible, a *spherical* or *globular* form, which propriety of *Phænomena* that proceed from it, I have more fully explicated in my Observation.

One Experiment, which does very much illustrate this, and is in it self exceeding pretty, I must not pass over. It is a way of making small *Globules* or *Balls* of Lead, or of Iron or Steel, and that exceeding easily and the filings or chips of those Metals also into perfect *Globules*. The way, in short, as I received it from the *Learned* is this;

Reduce the Metal you would thus shape, into the finer the filings are, the finer will the Balls be: with the fine and well dried powder of quick Lime proportioned to the quantity you intend to make: When your *Crucible*, by continual *stratifications* of the filings, that, as neer as may be, no one of the filings may touch the *Crucible* in a *gradual* fire, and by degrees let it be heated enough to make all the filings, that are mixt with the Lime, to run together, and no more; for if the fire be too hot, many of them will run together; whereas if the heat be proportioned to the Lime-dust in fair Water, all those small filings of Metal will slide to the bottom in a most curious powder, composed of round *Globules*, which, if it be very fine, is very excellent for the use of *glasses* of.

Now though quick Lime be the powder that is the best choice of, yet I doubt not, but that there may be many other ones found out, one of which I have made trial of, and it was equal; and were it not for discovering, by the mention of this Secret, which I am not free to impart, I should not have said it.

Observ. IX. Of the Colours observable in other thin Bodies.

*M*uscovy-glass, or *Lapis specularis*, is a Body that has many Curiosities in its Fabrick as any common *Crystal* with: for first, It is transparent to a great thickness, and is compounded of an infinite number of thin flakes joyned upon another so close & smooth, as with many hundred times more care and diligence may be slit into pieces so exceeding thin, hardly perceivable by the eye, and yet even those, which are the thinnest, I have with a good *Microscope* found to be composed of other Plates, yet thinner; and it is probable, that,